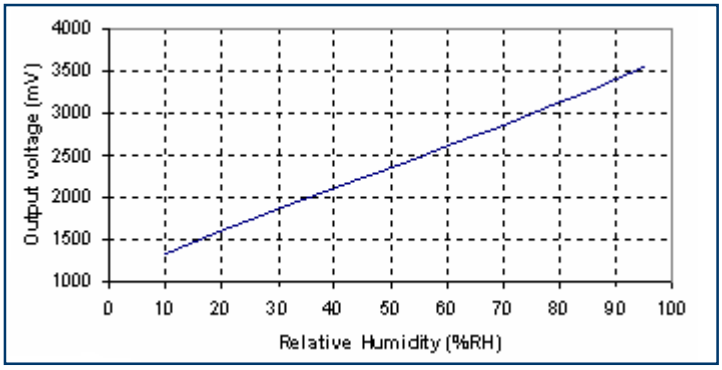
- **Modeled Signal Output**



RH (%)	Vout (mV)	RH (%)	Vout (mV)
10	1325	**55**	2480
15	1465	**60**	2605
20	1600	**65**	2730
25	1735	**70**	2860
30	1860	**75**	2990
35	1990	**80**	3125
40	2110	**85**	3260
45	2235	**90**	3405
50	2360	**95**	3555

LINEAR EQUATIONS:

- **V_{out} = 25.68RH + 1079**
- **RH = 0.03892 V_{out} - 42.017**

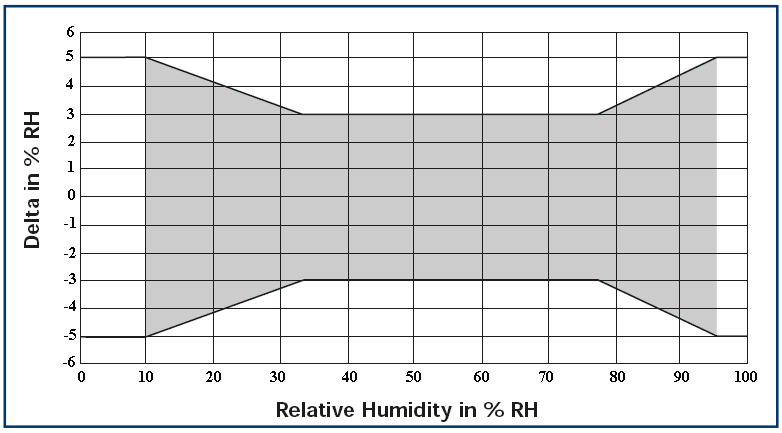
(With V_{out} in mV and RH in %)

POLYNOMIAL EQUATIONS:

- **$V_{out} = 9E^{-4}\,RH^3 - 1.3E^{-1}\,RH^2 + 30.815\,RH + 1030$**
- **$RH = -1{,}91E^{-9}\,V_{out}^{\ 3} + 1{,}33E^{-5}\,V_{out}^{\ 2} + 9{,}56E^{-3}\,V_{out} - 2{,}16E^{+1}$**

(With V_{out} in mV and RH in %)

- **Error Budget at 23°C**



TEMPERATURE COMPENSATION:

$$RH_{compensaed} = RH_{actualatT} + (T - 23) \times 0.05$$

(With T: Temperature in °C and RH: Relative Humidity in %)

QUALIFICATION PROCESS

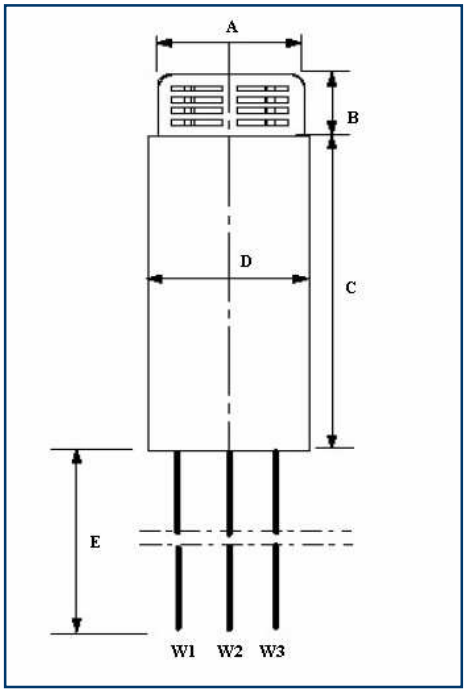
RESISTANCE TO PHYSICAL AND CHEMICAL STRESSES

- HM1500LF has passed through qualification processes of MEAS-FRANCE including vibration, shock, storage, high temperature and humidity, ESD.
- Additional tests under harsh chemical conditions demonstrate good operation in presence of salt atmosphere, SO2 (0.5%, H2S (0.5%), 03, NOx, NO, CO, CO2, Softener, Soap, Toluene, acids (H2SO4, HNO3, HCI), HMDS, Insecticide, Cigarette smoke, this is not an exhaustive list.
- HM1500LF is not light sensitive.

SPECIFIC PRECAUTIONS

- HM1500LF is protected against reversed polarity.
- If you wish to use HM1500LF in a chemical atmosphere not listed above, consult us.

PACKAGE OUTLINE



Dim	Min (mm)	Max (mm)
A	9.75	10.25
B	4.00	4.50
C	53	55
D	10.9	11.4
E*	200	250

** Specific lenght available on request*

Wire	Color	Function
W1	White	Ground
W2	Blue	Supply Voltage
W3	Yellow	Humidity Output Voltage